Video

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Segmental resection of the splenic flexure for colon cancer

<https://www.youtube.com/watch?v=Q73EkAJkt1g&t=108s>

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The authors declare no conflicts of interest.

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ABSTRACT

**Introduction:** Splenic flexure colon cancer allows for different surgical options, ranging from organ sparing techniques - such as splenic flexure resection - to more radical procedures as an extended right colectomy or a left colectomy.

**Description:** We present the clinical case of a 58-year-old woman, with a chronic platelet deficiency, and a positive fecal occult blood testing. She underwent a colonoscopy, revealing a 40-50 mm polyp located at the splenic flexure with a IV-V Kudo pattern, and a central depression, that did not elevate after submucosal injection.

Histopathology informed a moderately differentiated adenocarcinoma.

Staging was completed with a CT scan of the thorax, abdomen and pelvis, that showed a thickening of the colonic wall located at the vertical portion of the splenic flexure. There were no enlarged lymph nodes or distant metastases.

A splenic flexure resection was decided. The patient was set in a Trendelemburg position, and the operating table tilted to the right.

The procedure began with the section of the falciform ligament that allowed the placement of the transverse colon and the omentum over the liver, improving exposure. We apply traction to the transverse mesocolon, exposing the duodenojejunal angle and the inferior mesenteric vein (IMV) as it reaches the pancreas. Left Toldt´s fascia was approached medially, starting just below the IMV, and its dissection continued laterally with blunt maneuvers and care not to injure the retroperitoneum.

The IMV was then clipped and divided. The transverse mesocolon was detached from the anterior aspect of the pancreas towards the splenic flexure. The left colic artery was identified and divided at its origin, the phrenocolic ligament was sectioned as well as the left colon lateral attachments.

Transverse mesocolon and left mesocolon were sectioned. The transverse and the left colon were sectioned and the anastomosis performed with a 60 mm endo-stapler, and the colotomy was closed with a two-layers3-0 barbed suture.

The specimen was extracted through ainfraumbilical midline incision.

**Conclusion:** Splenic flexure resection is an oncologically safe procedure, especially for early onset cancer, and has fewer daily and nocturnal bowel movements when compared to classic colectomies, thus improving patient´s quality of life.

We present a video of a splenic flexure segmental colectomy, describing the major technical steps in order to perform an adequate surgical technique.

**Keywords**: Colon; Laparoscopy; Splenic Flexure; Cancer

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COMMENT

Colonic tumors of the splenic flexure represent less than 10% of colorectal tumors and are associated with a worse oncological prognosis due to their frequent presentation as urgency or advanced stage. The three most accepted therapeutic alternatives for the treatment of these tumors are: extended right colectomy, left colectomy or high left segmental colectomy.

The SFC (splenic flexure carcinoma) Study Group1 conducted a retrospective study comparing the three techniques in which no differences were observed in overall survival or disease-free survival. Based on better functional results, many groups have adopted laparoscopic left upper segmental colectomy as the treatment of choice for these tumors.2

In this video, the technical description of the left upper segmental colectomy due to a tumor of the splenic flexure is made through a clinical case. It presents an adequate pedagogical approach supported by a high-quality image and a neat and thorough surgical technique. The procedure concludes with the intracorporeal anastomosis, which offers the benefit of not tractioning the mesentery during the extraction of the specimen and allows choosing an extraction site that lead to less incisional hernia than the left subcostal incision.

I recommend using the Pfannenstiel incision instead of the infraumbilical median incision because it offers a lower risk of incisional hernia and a better cosmetic result.

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